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BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
Work Capacity Testing	Slippery Course Conditions (ice, snow, mud)	Locate a suitable test surface. Consider indoor facility, plowed airport, plowed road or other safe area.
		2. Postpone testing if conditions warrant.
		3. Test Participants wear footwear with good traction
Work Capacity Testing	Traffic	1. Select test course without traffic.
		2. Arrange for traffic control to eliminate traffic hazard.
		3. Make sure test participants are briefed about traffic hazard and controls implemented prior to the test.
Work Capacity Testing	Pack Rubbing, Chafing, or Straining Participants	Make sure test participants have practiced with a pack and have become work hardened to carry a pack.
		Provide prospective participants official time for fitness training where policy permits.
		3. Brief participants about the test just prior to beginning.
	. A T	4. Monitor participants for indications of distress and terminate the test for them.
		5. Permit participants to use a self-provided pack that meets the applicable weight requirement.

Attachment 2-4

Chapter 6 Exhibit 2 Page 15

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PROCEDURES
Work Capacity Testing	Heat Stress	Ensure Test Administrators understand the effects of exercising in heat, can recognize the symptoms of heat stress and know how to treat it.
		2. Where possible, schedule tests for the most favorable environmental conditions. Use the Heat Stress chart, page 29 of <i>Fitness and Work Capacity</i> , Second Edition. Avoid the "High" range.
		3. Inform prospective test participants they need to dress for the conditions and include the information in the pre-testing briefing.
		4. Make sure test participants are aware of the need for acclimatization. Provide time for employees to become acclimatized if conditions of the employment permit.
		5. Test Administrators include heat stress information in the test briefing if appropriate.
		6. Provide water at key points along the test course if conditions dictate.
		7. Test Administrators monitor all test participants for signs of heat stress, terminate test if indicated, and be prepared to provide treatment needed.
Work Capacity Testing	Cold Temperatures	1. Make sure Test Administrators know symptoms of cold related physical effects and are prepared to treat them.
		2. Inform prospective test participants the need to dress for the conditions and include information in the pre-test briefing.
		3. Locate an indoor facility suitable for testing if conditions warrant.
		4. Postpone testing if conditions warrant

Attachment 2-3

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Attachment 2-2		
9. Make sure the test participants do not exceed a walking pace.		
8. Have participants cool down and stretch after the test.		
7. Provide time prior to starting the test for participants to warm up and stretch.		
6. Give participants time to adjust packs for comfort prior to beginning the test.		
5. Ensure test participants have comfortable footwear that provides adequate suppo and protection to feet and ankles.		
4. Monitor participants for indications of distress and terminate the test for them.		
3. Brief participants about the test just prior to beginning.		
2. Provide prospective participants official time for fitness training where policy permits.		
 Provide information to prospective participants describing how to get into shape for the tests. 	Strains and Sprains	Work Capacity Testing
11. Ensure test participants are properly hydrated.		
10. Make sure test participants do not exceed a walking pace.		
9. Have a unit medivac plan and make sure Test Administrators know how to activate it.		
8. Have a person currently minimally qualified in first aid and CPR on site when testing is done with first aid supplies and equipment.		
7. Schedule tests when environmental conditions are most favorable.	Physical Overexertion	Work Capacity Testing
SAFE JOB PROCEDURES	POTENTIAL HAZARDS	BASIC JOB STEPS

Chapter 6 Exhibit 2 Page 13

U.S. Departmen	U.S. Department of the Interior	Date:	New:
National P	National Park Service		Revised:
JOI	JOB HAZARD	Page 1 of 4	Reviewed by: (Safety Mgr)
A	ANALYSIS		
Field Office/Work Group)	Supervisor:	Qual, Trng, Experience Required:
This JHA must be review	/ed, approved, and signed b	This JHA must be reviewed, approved, and signed by the Agency Administrator:	
Name:		Title:	Date:
BASIC JOB STEPS	POTENTIAL HAZARDS		SAFE JOB PROCEDURES
Work Capacity Testing	Physical Overexertion	1. Follow testing procedures provided in "Test Administrator's Guide."	"Test Administrator's Guide."
	The state of the s	Provide prospective test participants in to prepare for it.	2. Provide prospective test participants information about the test and describe how to prepare for it.
		3. Test subjects complete the "PAR-Q and YOU" health screen.	d YOU" health screen.
		 Provide prospective test participants o permits. 	 Provide prospective test participants official time for fitness training where police permits.
		5. Brief test participants about the test just prior to the test – answer questions concerning the test. Make them understand they are to quit and get help from the Test Administrators on the course if they begin to feel ill during the test.	5. Brief test participants about the test just prior to the test – answer questions concerning the test. Make them understand they are to quit and get help from one the Test Administrators on the course if they begin to feel ill during the test.
		6. Test Administrators monitor participants for distress during the test. Test Administrator is to terminate test if indicated by level of participant distress.	its for distress during the test. Test ated by level of participant distress.

Attachment 2-

Chapter 6 Exhibit 2 Page 12

Work Capacity Test Record

Units will utilize this Work Capacity Test Record for documenting administration of the Work Capacity Tests to all job applicants and employees. This documentation must be retained until the next Work Capacity Test is administered. Units will also be requested to provide data from these records to assist in the evaluation of the Work Capacity Testing process.

The information on this Work Capacity Test Record is considered confidential and must be filed appropriately. The identity of the individual must be protected.

Solicitation of this information is authorized by Title 5 U.S. Code Section 3301, which provides for a determination of an individual's fitness-for-duty.

l	leted by employee:			
Name (Last,	first):		17h	
Date of birth	<u>.</u>	TT : 1	where employed: _	
Data		Height:	Weig	ght:
Date test take	en:	Test administ	ered by:	
ICS position	for which test is req	uired (highest needed)	(print name)
Performance l	evel needed (circle	one): Arduous N	Moderate Light	
Туре	of test taken (circle	one): Pack Test	Field Test Walk	Test
Work Capacii	y Test Descriptions Pack Test	:: Field Test		
Pack weight:	45 lbs	25 lbs	Walk Test	
listance:	3 miles		none	
time:		2 miles	1 mile	
	45 minutes	30 minutes	16 minutes	
o ve complete	ed by test administr	ator		
est result time	:			
	ed test (circle one):			
			Bureau guidelines.	
	pack test was adm	motored according to		
certify that the		mistered according to	an odd guidennies.	
certify that the	est Administrator)		Title)	(Date)

revision 2 (Feb 1998)

Attachment 1-10

Chapter 6 Exhibit 2 Page 11

Questions and Answers Regarding the Health Screen

- Q Can I administer the questionnaire to a group of people at one time?
 - A The health screen contains personal information. It is important the answers be kept confidential. Administering it one-on-one will ensure the highest level of accuracy in responses; however, you may pass the form out and have the participants fill it out and turn it in for your review prior to administering the test.
- Q Will a yes answer on the questionnaire prevent the participant from taking the work capacity test?
 - A The yes answer will only mean that a physical and/or functional fitness evaluation is required. The doctor will make a determination regarding the Work Capacity Test. (WCT)
- Q What if I suspect the participant is not answering truthfully?
 - A You are not responsible for the participant's honesty. Participants are accountable and responsible for their own health. If they choose to answer a question dishonestly, they will not receive the agency provided medical evaluation that might identify or eliminate a condition or problem.
- Q Should the Health Screen be done prior to beginning a fitness program?
 - A Yes, this is especially important when an employee is considered to be at risk or engaged in a fitness program on work time in preparation for the WCT.
- Q Should overweight people take the work capacity test?
 - A Persons who fall within the obese or extremely obese categories identified on page 27 of the Fitness and Work Capacity publication should consult their physician prior to beginning any fitness program.
- O As a Test Administrator, how do I determine whether to administer the WCT?
 - A You must review the questionnaire for completeness and assure all questions are answered either yes or no. Only administer the WCT to individuals who answer NO to all questions.

Attachment 1-9

Chapter 6 Exhibit 2 Page 10

		People Aged 15 to 69) seople are starting to become more active every day. Being middle of the start because midd
,	to become much more physically active than you a le ages of 15 and 69, the PAR-Q will tell you if you se e not used to being very active, chack with your	ire now, start by answering the source
		riease read the questions carefully and answer each one hones
YES NO		
		condition and that you should only do physical activity
	you do phys	sical activity?
<u> </u>	In the past month, have you had chest pain whe	n you were not doing physical activity?
O 0 4.	Do you lose your balance because of dizziness of	or do you ever lose consciousness?
D D 5.	Do you have a bone or joint problem that could be	e made worse by a change in your physical and the
	is your doctor currently prescribing drugs (for exa	imple, water pills) for your blood pressure or heart condition?
□ □ 7.	Do you know of any other reason why you should	not do physical activity?
. N	Find out which community programs are safe and	
 start becoming m 	estly to all PAR-O questions, you can be reasonably uch more physically active — begin slowly and build	DELAY BECOMING MUCH MORE ACTIVE: • if you are not feeling well because of a temporary illness such as a cot of a fever — wait until you feel better; or • if you are or may be pregnant — talk to your doctor before you start becoming more active.
take part in a fitne	s is the safest and easiest way to go. ss appraisal — this is an excellent way to determine so that you can plan the best way for you to live	Take occoming more active.
your basic fitnes: actively.	The Canadian Society for Exercise Physiology, Health Canada, a his questionnaire, consult your doctor prior to physical activity.	nd their agents assume no liability for persons who undertake physical activity, and
actively.		Nut only if
actively. actively. actively. actively. actively. actively. actively.	You are encouraged to copy the PAR-Q t	ony if you use the entire form
actively. actively. Commed Use of the PAR-O doubt after completing TE: If the PAR-O is booministrative purposas	You are encouraged to copy the PAR-O to given to a person before he or she participates in a physical	activity program or a fitness appraisal, this section may be used for legal or
actively. actively.	ng given to a person before he or she participates in a physical	activity program or a filness appraisal, this section may be used for legal or used on legal or used on the legal or used or u
actively. actively. Commed Use of the PAR-O doubt after completing TE: If the PAR-O is booministrative purposas	ng given to a person before he or she participates in a physical	activity program or a filness appraisal, this section may be used for legal or used for legal or used fons I had were answered to my full satisfaction.
your basic lines. actively. pamed Use of the PAR-O is be administrative purposes. I have read, us VE VATURE VATURE OF PARENT.	ng given to a person before he or she participates in a physical	activity program or a fitness appraisal, this section may be used for legal or

Attachment 1-8

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Chapter 6 Exhibit 2 Page 9

Essentials of Good Testing

- An accurately measured flat course with good surface.
- Proper weight packs. Verify pack weight with a calibrated scale. If alternative packs are used, candidates are responsible for proper adjustments.
- Duplicate and accurate timing. Give candidates split times along the course.
- Candidates should be rested and well informed about the course and the need to maintain
- Favorable environmental conditions. Avoid adverse conditions.
- Complete the Health Screening Questionnaire.

Safety

- A locally developed and approved Job Hazard Analysis and safety/medical evacuation plan must be prepared for the course.
- Test administrator must be familiar with the safety plan.
- An individual trained and qualified in first aid who knows the symptoms of physical distress and appropriate CPR procedures must be on site during the test.
- Avoid use of roads and intersections where traffic is a problem or concern.
- Check to see that candidates are wearing proper footwear.
- Encourage candidates to stretch and warm up prior to the test.
- Do not test tired or injured individuals or test during conditions that could compromise
- Test administrator shall maintain visual contact and monitor candidates to identify those having difficulties and terminate the test if necessary.
- Encourage fluid intake and replacement and provide fluids en route when heat stress conditions (temperature/humidity) exist.
- Encourage a cool down with an easy walk after the test. Monitor the recovery of candidates, especially those who appear distressed.

Attachment 1-7

Chapter 6 Exhibit 2 Page 8

Altitude: Use the altitude correction chart, page 51, Fitness and Work Capacity, Second Edition to adjust for test administration above 4,000 ft.

Altitude (Feet)	1-mile Walk Test (Seconds)	2-mile Field Test (Seconds)	3-mile Pack Test (Seconds)
4000	10	20	
5000	15		30
6000		30	45
	20	40	60
7000	25	50	
8000		30	75
ne correction to the re-	30	60	90

The altitude adjustment assumes that the candidate has had an opportunity to acclimate to the altitude of the test site. If a candidate doesn't meet the required standard, even with the adjustment, he or she should be encouraged to train at the altitude and retake the test.

Testing Considerations

Clothing: Candidates may select the clothing worn during the test. "T" Shirts and shorts are acceptable. Footwear will be determined by the JHA.

Safety: Brief candidates on the test, the course, and safety considerations. Tell candidates to terminate the test if they experience major physical problems or discomfort, or feel the need to stop for any other reason. The test administrator may also terminate the test if the candidate falls well behind the required pace and/or shows significant signs of fatigue.

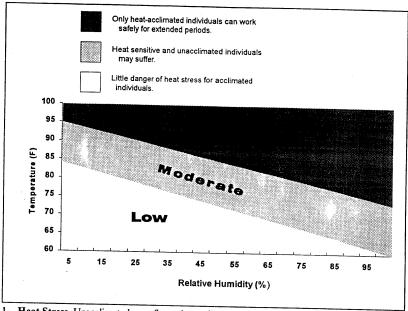
Warm-up: Encourage candidates to stretch (calves, hamstrings, lower back) and warm-up before

Pace: Demonstrate to candidates how they should hike (power walk) the course and give split times for required pace. The heel of one foot must make contact before the opposite toe leaves the ground. Jogging or running will invalidate results and require a retest.

Accommodations: Candidates may use padding to make the pack more comfortable. A candidate-provided walking staff may be used during the test.

Competition: Candidates will be advised that the Work Capacity Test is not a competitive event. There is no benefit to exceeding the required time for fitness ratings.

Attachment 1-6



1—Heat Stress. Unacclimated or unfit workers will suffer at lower levels of heat or work. (Chart is based on shaded air temperature, moderate radiant heat, light breeze, standard firefighter clothing, and moderate work rate.)

Hydration: If the weather is hot, encourage candidates to drink fluids prior to the test and provide fluid replacement at the mid-point in the course. Candidates may carry a water bottle (not part of the pack weight).

Attachment 1-5

Chapter 6 Exhibit 2 Page 6

Notify candidates 6-8 weeks in advance of test date if possible to enable them to prepare. Send the Work Capacity Test Brochure to explain the test and provide suggestions for training,

Candidates will be briefed to insure that all are informed concerning the test, the course, safety and other site-specific information. The test will be halted if any of the following signs are

- 1. Discomfort, pressure, or pain in the chest
- 2. Dizziness, light headedness, sudden loss of coordination
- 3. Difficulty breathing or shortness of breath
- 4. Abnormal heart activity (fluttering, irregular beats or sudden drop in rate)

Testing Tips

Weigh packs before test. Check weight after the test if necessary.

Group or staggered starts can be used. Some candidates will benefit from the support

Environmental Conditions

Administer the test in moderate environment conditions; do not test new recruits when the temperature is high or when the temperature and humidity combine to create high heat stress conditions. (See heat stress chart, from page 29, Fitness and Work Capacity, Second Edition). If necessary; test early in the day to avoid high temperature/humidity combinations; avoid high

Attachment 1-4

Chapter 6 Exhibit 2 Page 5

Lap Counter(s) - if needed to record laps completed by each candidate.

Timer - to keep the time during the test.

For small groups, two people may be able to administer the test. For larger groups or when course monitoring is difficult, three or more will be needed.

The Course

Course must be essentially level and have a firm, relatively smooth walking surface. Course length must be accurate: double-check measurements. Use a measuring wheel or a calibrated bicycle computer. Vehicle odometers are not sufficiently accurate.

Loop or out- and -back courses are preferable. Avoid one-way courses where unfavorable conditions (wind, grade) are not offset. A moderate grade (2-3 percent) is acceptable if the course starts and finishes at the same place. Have lap counters available for multi-loop courses. Use course monitors when needed.

Candidates must be informed of the course layout. (Use a map or sketch of the course.) Use distance markers to aid candidates. Use hazard and traffic markers as needed.

Equipment

Packs: Agency will provide the appropriate pack at the test site. The participant may use their own pack if desired.

Safety Vests/Route Markers: As needed.

Distance Markers: Use mile and mid-point markers so candidates can maintain proper pace.

Stop watches: Utilize two watches to provide back-up timing.

Vehicle: Bicycle or other vehicle as needed to monitor candidates on the course.

Radios/C-Phones: As needed for monitoring and safety

Scale: An accurate scale is required for weighing packs.

Forms:

Health Screen

Work Capacity Test Record

Attachment 1-3

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Chapter 6 Exhibit 2 Page 4

Light

"Duties mainly involve office type work with occasional field activity characterized by light physical exertion requiring basic good health. Activities may include climbing stairs, standing, operating a vehicle, and long hours of work, as well as some bending, stooping, or light lifting. Individuals almost always can govern the extent and pace of their physical activity." (Ref. NWCG

Test Administration

- 1. Job Hazard Analysis (JHA) shall be developed and approved for each Field Office prior to administrating the Work Capacity Test. A generic JHA is attached for your consideration.
- 2. A Health Screen will be administered prior to initiating a physical training program and/or the Work Capacity Fitness Test with the following objectives:
 - A. To identify, prior to the work capacity testing, (at risk) personnel;
 - B. To identify existing injuries or illness and minimize the probability of new injuries; C. To establish the need for a medical evaluation.
- 3. Administer the test using this guide.
- 4. (Documentation) is accomplished by utilizing the Health Screen and Work Capacity Test Record (both included in this package). These documents must be retained until the next testing.

Personnel

The number of individuals needed to administer the test will depend on the course lay out, testing conditions, and the number of candidates to be tested. In some cases one person will fill multiple roles (e.g., administrator, timer; first responder, course monitor). All persons involved in the testing must understand the instructions and safety considerations, as well as their individual roles and responsibilities. A pre-test briefing for the test administration personnel is recommended. The following personnel may be necessary for test administration:

Test Administrator - The person in charge of the administration of the test at the test site must understand test procedures, Job Hazard Analysis (JHA) and local medical/evacuation plan. Responsible for monitoring participants and stopping the test if appropriate.

Medical Assistance - A person currently qualified for first aid and CPR will be on site to provide assistance, if needed, and to observe candidates during the test

Course Monitor - The test administrator will determine the number needed to monitor

Attachment 1-2

Chapter 6 Exhibit 2 Page 3

Test Administrator's Guide to Job-related Work Capacity Tests for Wildland Firefighters 1998

Instructions

Studies of wildland firefighting clearly show the link between fitness and work performance. Fit workers can do more work with less fatigue and still have a reserve to meet unforeseen emergencies. They perform better in a hot environment and recover faster from adverse firefighting conditions like long shifts and reduced rest. In short, fitness is the most important factor in work capacity.

Job-related Work Capacity Tests (WCTs) are used to determine a firefighter's level of fitness for the National Wildfire Coordinating Group's Wildland Fire Qualifications Subsystem, 310-1. The 310-1 defines four fitness levels-Arduous, Moderate, Light and None. The Arduous, Moderate, and Light fitness levels require an individual to demonstrate their ability to perform the fitness requirements of the position.

Work Capacity Test

Work Category	Test	Distance	Weight	Time
Arduous	Pack Test	3 miles	45 lb	45 min.
Moderate	Field Test	2 miles	25 lb	30 min.
Light	Walk Test	1 mile	none	16 min.

Arduous

"Duties involve field work requiring physical performance calling for above average endurance and superior conditioning. These duties may include an occasional demand for extraordinarily strenuous activities in emergencies under adverse environmental conditions and over extended periods of time. Requirements include running, walking, climbing, jumping, twisting, bending, and lifting more than 50 pounds; the pace of work typically is set by the emergency conditions." (Ref. NWCG 310-1.)

Moderate

"Duties involve field work requiring complete control of all physical faculties and may include considerable walking over irregular ground, standing for long periods of time, lifting 25 to 50 pounds, climbing, bending, stooping, twisting, and reaching. Occasional demands may be required for moderately strenuous activities in emergencies over long periods of time. Individuals usually set their own work pace." (Ref. NWCG 310-1.)

Attachment 1-1

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Chapter 6 Exhibit 2 Page 2

"Work Capacity Tests for Wildland Firefighters and Support Personnel" is a general orientation video for all employees who will be participating in and supporting wildland fire operations. The video explains the Pack-Field-Walk Tests for the arduous-moderate-light physical fitness requirements defined in the NWCG Wildland Fire Qualification Subsystem Guide (310-1). This video should be shown in advance of testing. It is also intended for use with in-service groups, as well as others such as prospective employees. Persons who will be administering the test(s) should also view this video prior to conducting any tests.

"Administering Work Capacity Tests for Wildland Firefighters and Support Personnel" contains information to help those personnel involved with selecting test courses and conducting the jobrelated WCT's. Persons involved with test oversight must review this video. It is to be used with the enclosed "Administrator's Guide for Work Capacity Tests".

3. "Test Administrator's Guide for Work Capacity Tests"

The Guide contains specific instructions and forms for conducting the tests. Also enclosed is the USDA-Forest Service copy of the Guide which provides additional information.

4. Job Hazard Analysis

The generic Job Hazard Analysis (JHA) is enclosed which must be completed for each site prior to testing.

Additional information concerning fitness and training for WCT's can be found in the publication "Fitness and Work Capacity, Second Edition". This publication may be ordered through the NWCG Publications Management System, NIFC.

If you have any questions, contact your regional Fire Management Officer or Paul Broyles, Fire Operations and Safety, FMPC, NIFC 208-387-5226.

cc: Regional Fire Management Officers Chief, Risk Management Division

Attachments (2)
Test Administrator's Guide (10 pp.)
Job Hazard Analysis (4pp.)

WILDLAND FIRE MANAGEMENT **REFERENCE MANUAL - 18**

Training, Qualifications and Certification

Chapter 6 Exhibit 2 Page 1



United States Department of the Interior

NATIONAL PARK SERVICE Fire Management Program Center 3833 South Development Avenue Boise, Idaho 83705-5354

A76(NIFC)

April 27, 1998

Memorandum

To:

Park Superintendent

Attn: Fire Management Officer

Artivia Manager, Fire Management Program Center PRB

Subject: Wildland Fire Work Capacity Test Implementation Package

In 1997, the National Wildfire Coordinating Group approved the use of the Work Capacity Test Series (WCT's: Pack, Field, and Walk tests) as the sole physical fitness screen for wildland fire management activities, with an implementation date of January 1, 1998. Thus, on that date the National Park Service instituted that series of tests, replacing the previous "step test" and "1 ½ mile run" as the determinant screening tests. Preliminary test administration and information had been sent out to the field in 1997 to allow personnel to begin practicing the tests.

Enclosed are formal materials designed to assist you in implementing the WCT's for wildland fire management personnel. These materials will help employees more fully understand the fitness testing and begin training, and will familiarize test administrators with information needed to correctly implement testing.

The package includes:

1. A brochure titled "The Pack Test-Work Capacity Testing for Wildland Firefighters"

This brochure contains basic orientation information on the three levels of work capacity testing. The information is useful for all people interested in wildland firefighting and supporting wildland fire operations; its focus is on preparing for the appropriate level of test. Additional brochures will be forwarded through your regional offices.

2. Work Capacity Videos

There are two videos in the package which are designed to provide information needed for employee safety and accurate testing results.